

PHOTOMOD

UAV data processing



Spatial aerial
triangulation

Digital terrain models
2D and 3D-vectorization

Orthorectification
and mosaic creation

Map making
3D-modeling



The Digital photogrammetric system PHOTOMOD allows the user to process UAV data and acquire all types of value added photogrammetric products: DEM, 3D-vectors, orthomosaics, digital 2D and 3D maps.

The main techniques of UAV data processing in the PHOTOMOD system are rigorous photogrammetric processing of images with accuracy comparable with ground sample distance (GSD), and simplified method with absolute accuracies of about tens of meters.



UAV images based mosaics. Source images provided by OJSC «Gazprom space systems».

Functionality, high performance and automation of photogrammetric operations are key benefits, allowing the user to consider PHOTOMOD as the optimal solution for UAV data processing. The system allows the user to improve processing performance due to distributed processing approach, and uses most effectively the computational capabilities available. Block layout creation, cutlines building, tie points search and measurement, as well as DEM building and filtering are available in the system in fully automatic mode.

Advantages of UAV usage include:

- Operative images acquisition.
- Survey available from low altitudes and close to objects.
- Collecting of high resolution images.
- Can be used in emergency zones without risk to life and health of pilots.
- High Profitability.

While there are many advantages of an unmanned survey, the features of the UAV data pose serious problems for photogrammetric processing. The low quality of images, the low accuracy of the on-board GPS / IMU data, the use of uncalibrated consumer cameras and bugs related to the instability of the flight - all this required adding to the PHOTOMOD system special tools to neutralize these disadvantages and to obtain high-quality deliverables.*

The highly professional and operative technical support services of the Racurs company – the PHOTOMOD software developer – supports customers during all workflow stages, providing consultation, training, and the execution of test projects.

*The software has been tested on images collected by Pentax Optio, Canon 1000D, Canon EOS 5D Mark II, Canon Digital IXUS 120 IS, Canon EOS 5D, and Ricoh GR Digital 14102033 cameras. The survey was accomplished using Ptero, Zala, CropCam, and Gatewing unmanned aircraft systems.

Racurs provides unlimited technical support for its customers. Experienced software support specialists provide immediate professional help by phone, fax or e-mail.

Download Lite version of PHOTOMOD! The program is created to help familiarize with the systems features and functionality and allows you to perform test projects using your data.



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